

WHAT IS CLAIMED IS:

1 1. A composition comprising a serum in which are dissolved a plurality
2 of heterologous antibodies that are independently IgG or IgM, each of said antibodies
3 specifically binding to different antigens.

1 2. The composition of claim 1, wherein said plurality of heterologous
2 antibodies comprises three said heterologous antibodies.

1 3. The composition of claim 1, wherein said plurality of heterologous
2 antibodies comprises five said heterologous antibodies.

1 4. The composition of claim 1, wherein said plurality of heterologous
2 antibodies comprises ten said heterologous antibodies.

1 5. The composition of claim 1, wherein said plurality of heterologous
2 antibodies comprises fifteen said heterologous antibodies.

1 6. The composition of claim 1, wherein said different antigens are
2 derived from one or more organisms independently selected from the group consisting of
3 *Toxoplasma gondii*, Rubella virus, Cytomegalovirus (CMV), Herpes Simplex Virus type-1
4 (HSV-1), Herpes Simplex Virus type-2 (HSV-2), Mumps Virus, Measles Virus, Epstein-Barr
5 Virus (EBV), Varicella Zoster Virus, *Borrelia burgdorferi*, *Treponema pallidum*,
6 *Helicobacter pylori*, and *Mycoplasma pneumoniae*.

1 7. The composition of claim 6, wherein said different antigens derived
2 from Epstein-Barr Virus (EBV) comprise antigens derived from Epstein-Barr Virus Viral
3 Capsid Antigen (EBV-VCA), Epstein-Barr Virus Nuclear Antigen type-1 (EBV-NA1), and
4 Epstein-Barr Virus Early Antigen Diffused (EBV-EAD).

1 8. The composition of claim 6, wherein said different antigens are
2 derived from Epstein-Barr Virus Viral Capsid Antigen (EBV-VCA), Epstein-Barr Virus
3 Nuclear Antigen type-1 (EBV-NA1), and Epstein-Barr Virus Early Antigen Diffused (EBV-
4 EAD).

1 9. The composition of claim 6, wherein said different antigens are
2 derived from Rubella virus, Mumps Virus, and Measles Virus.

1 10. The composition of claim 6, wherein said different antigens are
2 derived from *Toxoplasma gondii*, Rubella virus, Cytomegalovirus (CMV), Herpes Simplex
3 Virus type-1 (HSV-1), and Herpes Simplex Virus type-2 (HSV-2).

1 11. The composition of claim 6, wherein said different antigens are
2 derived from *Toxoplasma gondii*, Rubella virus, Cytomegalovirus (CMV), Herpes Simplex
3 Virus type-1 (HSV-1), Herpes Simplex Virus type-2 (HSV-2), Mumps Virus, Measles Virus,
4 Varicella Zoster Virus, *Treponema pallidum*, *Helicobacter pylori*, Epstein-Barr Virus Viral
5 Capsid Antigen (EBV-VCA), Epstein-Barr Virus Nuclear Antigen type-1 (EBV-NA1), and
6 Epstein-Barr Virus Early Antigen Diffused (EBV-EAD).

1 12. The composition of claim 6, wherein said different antigens are
2 derived from *Toxoplasma gondii*, Rubella virus, Cytomegalovirus (CMV), Herpes Simplex
3 Virus type-1 (HSV-1), Herpes Simplex Virus type-2 (HSV-2), Mumps Virus, Measles Virus,
4 Varicella Zoster Virus, *Borrelia burgdorferi*, *Treponema pallidum*, *Helicobacter pylori*,
5 *Mycoplasma pneumoniae*, Epstein-Barr Virus Viral Capsid Antigen (EBV-VCA), Epstein-
6 Barr Virus Nuclear Antigen type-1 (EBV-NA1), and Epstein-Barr Virus Early Antigen
7 Diffused (EBV-EAD).

1 13. A method for analyzing a biological sample to detect the presence and
2 amount of IgG or IgM antibodies to a plurality of predetermined different antigens, said
3 method comprising:

4 (a) contacting said biological sample with said plurality of predetermined different
5 antigens under conditions sufficient to allow the formation of antigen/antibody complexes
6 between any of said plurality of predetermined different antigens and any of IgG or IgM
7 antibodies present in said sample that specifically bind to any of said plurality of
8 predetermined different antigens;

9 (b) detecting any antigen/antibody complexes thus formed; and

10 (c) comparing the result of step (b) to a result obtained by

11 (i) contacting a control composition with said plurality of predetermined
12 different antigens, said control composition comprising a serum in
13 which are dissolved a plurality of heterologous antibodies that are
14 independently IgG or IgM, each of said antibodies specifically binding
15 to one of said plurality of predetermined different antigens, and

16 (ii) detecting the formation of antigen/antibody complexes between any of said
17 plurality of predetermined different antigens and any of said plurality
18 of heterologous antibodies present in said control composition,
19 to identify any of said IgG or IgM antibodies present in said biological sample and to
20 quantify the levels in said biological sample of any of said IgG or IgM antibodies thus
21 identified.

1 14. The method of claim 13, wherein said plurality of heterologous
2 antibodies comprises three said heterologous antibodies.

1 15. The method of claim 13, wherein said plurality of heterologous
2 antibodies comprises five said heterologous antibodies.

1 16. The method of claim 13, wherein said plurality of heterologous
2 antibodies comprises ten said heterologous antibodies.

1 17. The method of claim 13, wherein said plurality of heterologous
2 antibodies comprises fifteen said heterologous antibodies.

1 18. The method of claim 13, wherein said different antigens are derived
2 from one or more organisms independently selected from the group consisting of *Toxoplasma*
3 *gondii*, Rubella virus, Cytomegalovirus (CMV), Herpes Simplex Virus type-1 (HSV-1),
4 Herpes Simplex Virus type-2 (HSV-2), Mumps Virus, Measles Virus, Epstein-Barr Virus
5 (EBV), Varicella Zoster Virus, *Borrelia burgdorferi*, *Treponema pallidum*, *Helicobacter*
6 *pylori*, and *Mycoplasma pneumoniae*.

1 19. The method of claim 18, wherein said different antigens derived from
2 Epstein-Barr Virus (EBV) comprise antigens derived from Epstein-Barr Virus Viral Capsid
3 Antigen (EBV-VCA), Epstein-Barr Virus Nuclear Antigen type-1 (EBV-NA1), and Epstein-
4 Barr Virus Early Antigen Diffused (EBV-EAD).

1 20. The method of claim 18, wherein said different antigens are derived
2 from Epstein-Barr Virus Viral Capsid Antigen (EBV-VCA), Epstein-Barr Virus Nuclear
3 Antigen type-1 (EBV-NA1), and Epstein-Barr Virus Early Antigen Diffused (EBV-EAD).

1 21. The method of claim 18, wherein said different antigens are derived
2 from Rubella virus, Mumps Virus, and Measles Virus.

1 **22.** The method of claim 18, wherein said different antigens are derived
2 from *Toxoplasma gondii*, Rubella virus, Cytomegalovirus (CMV), Herpes Simplex Virus
3 type-1 (HSV-1), and Herpes Simplex Virus type-2 (HSV-2).

1 **23.** The method of claim 18, wherein said different antigens are derived
2 from *Toxoplasma gondii*, Rubella virus, Cytomegalovirus (CMV), Herpes Simplex Virus
3 type-1 (HSV-1), Herpes Simplex Virus type-2 (HSV-2), Mumps Virus, Measles Virus,
4 Varicella Zoster Virus, *Treponema pallidum*, *Helicobacter pylori*, Epstein-Barr Virus Viral
5 Capsid Antigen (EBV-VCA), Epstein-Barr Virus Nuclear Antigen type-1 (EBV-NA1), and
6 Epstein-Barr Virus Early Antigen Diffused (EBV-EAD).

1 **24.** The method of claim 18, wherein said different antigens are derived
2 from *Toxoplasma gondii*, Rubella virus, Cytomegalovirus (CMV), Herpes Simplex Virus
3 type-1 (HSV-1), Herpes Simplex Virus type-2 (HSV-2), Mumps Virus, Measles Virus,
4 Varicella Zoster Virus, *Borrelia burgdorferi*, *Treponema pallidum*, *Helicobacter pylori*, and
5 *Mycoplasma pneumoniae*, Epstein-Barr Virus Viral Capsid Antigen (EBV-VCA), Epstein-
6 Barr Virus Nuclear Antigen type-1 (EBV-NA1), and Epstein-Barr Virus Early Antigen
7 Diffused (EBV-EAD).

1 **25.** The method of claim 13, wherein steps (b) and (c)(ii) are performed by
2 flow cytometry.